

We claim:

1. A method for treating and/or ameliorating the symptoms of a cerebral ischemic condition in a mammalian subject, comprising administering to the subject an effective amount of a non-alpha tocopherol enriched tocopherol composition, and
5 by said administering, reducing neuronal damage related to said cerebral ischemic condition.

2. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a gamma-tocopherol enriched tocopherol composition.

3. The method of claim 1 wherein the non-alpha tocopherol enriched
10 tocopherol composition is a gamma-tocopherol metabolite enriched composition.

4. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a beta-tocopherol enriched tocopherol composition.

5. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a beta-tocopherol metabolite enriched composition.

15 6. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a delta-tocopherol enriched tocopherol composition.

7. The method of claim 1 wherein the non-alpha tocopherol enriched tocopherol composition is a delta-tocopherol metabolite enriched composition.

20 8. The method of claim 3 wherein said gamma-tocopherol metabolite is gamma-CEHC.

9. The method of claim 1 wherein the cerebral ischemic condition is secondary to an occlusion of the cerebral vasculature.

10. The method of claim 9 wherein the occlusion is due to a thromboembolis.

11. The method of claim 1 wherein the cerebral ischemia is due to a spasm of
25 the coronary vasculature.

12. The method of claim 1 wherein the cerebral ischemic condition is secondary to a cessation of cardiac function.

13 The method of claim 1 wherein the cerebral ischemic condition is secondary to a cardiopulmonary bypass procedure.

14. The method of claim 1 wherein the cerebral ischemic condition is secondary to a hemorrhagic event in the cerebral vasculature.

5 15. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 60% gamma-tocopherol.

16. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 65% gamma-tocopherol.

10 17. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 70% gamma-tocopherol.

18. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 75% gamma-tocopherol.

19. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 80% gamma-tocopherol.

15 20. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 85% gamma-tocopherol.

21. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 90% gamma-tocopherol.

20 22. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 95% gamma-tocopherol.

23. The method of claim 2 wherein said gamma-tocopherol enriched tocopherol composition comprises at least 98% gamma-tocopherol.

24. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 60% gamma-tocopherol metabolite.

25 25. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 65% gamma-tocopherol metabolite.

26. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 70% gamma-tocopherol metabolite.

27. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 75% gamma-tocopherol metabolite.

28. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 80% gamma-tocopherol metabolite.

5 29. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 85% gamma-tocopherol metabolite.

30. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 90% gamma-tocopherol metabolite.

10 31. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 95% gamma-tocopherol metabolite.

32. The method of claim 3 wherein said gamma-tocopherol metabolite enriched composition comprises at least 98% gamma-tocopherol metabolite.

15 33. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 50% beta-tocopherol.

34. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 65% beta-tocopherol.

35. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 75% beta-tocopherol.

20 36. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 90% beta-tocopherol.

37. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 95% beta-tocopherol.

25 38. The method of claim 4 wherein said beta-tocopherol enriched tocopherol composition comprises at least 98% beta-tocopherol.

39. The method of claim 5 wherein said beta-tocopherol metabolite enriched composition comprises at least 50% beta-tocopherol metabolite.

40. The method of claim 5 wherein said beta-tocopherol metabolite enriched composition comprises at least 65% beta-tocopherol metabolite.
41. The method of claim 5 wherein said beta-tocopherol metabolite enriched composition comprises at least 90% beta-tocopherol metabolite.
- 5 42. The method of claim 6 wherein said delta-tocopherol enriched tocopherol composition comprises at least 50% delta-tocopherol.
43. The method of claim 6 wherein said delta-tocopherol enriched tocopherol composition comprises at least 65% delta-tocopherol.
44. The method of claim 6 wherein said delta-tocopherol enriched tocopherol
10 composition comprises at least 75% delta-tocopherol.
45. The method of claim 6 wherein said delta-tocopherol enriched tocopherol composition comprises at least 90% delta-tocopherol.
46. The method of claim 6 wherein said delta-tocopherol enriched tocopherol composition comprises at least 95% delta-tocopherol.
- 15 47. The method of claim 6 wherein said delta-tocopherol enriched tocopherol composition comprises at least 98% delta-tocopherol.
48. The method of claim 7 wherein said delta-tocopherol metabolite enriched composition comprises at least 50% delta-tocopherol metabolite.
49. The method of claim 7 wherein said delta-tocopherol metabolite enriched
20 composition comprises at least 65% delta-tocopherol metabolite.
50. The method of claim 7 wherein said delta-tocopherol metabolite enriched composition comprises at least 90% delta-tocopherol metabolite.
51. The method of claim 1 wherein said composition is a nutritional composition.
- 25 52. The method of claim 1 wherein said composition is a pharmaceutical composition.
53. The method of claim 1 wherein said composition is administered orally.

54. The method of claim 1 wherein said composition is administered parenterally.

55. The method of claim 1 wherein said composition comprises a non-alpha tocopherol in a range of 1-1000 mg per kg body weight of said mammalian subject.

5 56. The method of claim 1 wherein said composition comprises a non-alpha tocopherol in a range of 1-50 mg per kg body weight of said mammalian subject.

57. The method of claim 1 wherein said composition comprises a non-alpha tocopherol in a range of 10-100 mg per kg body weight of said mammalian subject.

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